



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,961	11/21/2003	Clifford C. Bampton	024.0037	4430

29906 7590 01/18/2006

INGRASSIA FISHER & LORENZ, P.C.  
7150 E. CAMELBACK, STE. 325  
SCOTTSDALE, AZ 85251

EXAMINER

JENKINS, DANIEL J

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/718,961	BAMPTON, CLIFFORD C.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Daniel J. Jenkins	1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. The Examiner has carefully considered Applicant's Response of 9/29/05. The Examiner makes a new rejection and argument in response to Applicant's amendments, the Action accordingly made Final.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 20, 21 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Watwe.

Watwe discloses a powder blend comprising:

a titanium powder (col. 2, lines 60-61); and

an elemental tin powder (col. 2, line 63; col. 3, lines 11-14).

The Examiner notes that no weight is given to the intended use of the blend as given in the preamble and that no weight is given to the characteristics the blend have during further processing.

The blend is disclosed as not containing a polymer component.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watwe. Watwe discloses the invention substantially as claimed (see paragraph 3 above). Watwe discloses a tin amount which end point touches at 5% Applicant's claimed range, establishing a prima facie case of obviousness (see MPEP 2144.05).

6. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bampton et al. in view of Obara et al. and further in view of Freitag et al.

Bampton et al. qualifies as art under 102(b).

Bampton et al. discloses the method substantially as claimed.

Bampton et al. discloses a method of forming a material body comprising:

providing a powder mixture; and

selective laser sintering (SLS) the provided powder mixture to form a material body.

Bampton et al. further discloses wherein the material body is further processed by HIP treatment (col. 3, lines 11-19)

Bampton et al. discloses wherein the powder mixture comprises:

a base material selected from a group comprising titanium (Ti) (col. 3, lines 51-58); and

an alloying material selected from metals with a lower melting point than the selected base material (col. 3, lines 61-68).

However, Bampton et al. does not disclose wherein Sn would be selected with Ti as an alloying agent, and a range of Ti alloys as claimed by Applicant in dependent claims.

Obara et al. teaches that titanium alloys can be formed of elements including Ni, Cu and Sn wherein the alloying elements are added as additive powders (col. 2, line 60 to col. 3, line 18). Obara et al. further teaches that the alloy is formed by a two step heating/sintering process, that although not SLS, is an analogous heating regiment to Bampton et al., allowing one of ordinary skill to select the Ti metal system of Obara et al. for the alloy selection of Bampton et al. when forming a Ti alloy of good machinability and weldability (see col. 1, lines 4-8).

Thus, Bampton et al. in view of Obara et al. discloses a mixture of metal powders which would be necessary to form said alloy.

Bampton et al. further discloses that a polymer binder material can be added when forming a complex shape for providing support (col. 2, lines 37-41), so that the additive could be deleted by one of ordinary skill when forming a non-complex shape.

The Examiner notes that Freitag et al. teaches dispensing metal powders to a two step SLS/HIP processs that does not contain a ploymer binder, wherein the particles are SLS in layers such that no binder is necessary to build the formed material prior to HIP treatment.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Jenkins whose telephone number is 571-272-1242. The examiner can normally be reached on M-TH6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1242. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel J. Jenkins  
Primary Examiner  
Art Unit 1742

dj